

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference IP 4707 PCT	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/EP2004/004095	International filing date (day/month/year) 17.04.2004	Priority date (day/month/year) 27.06.2003
International Patent Classification (IPC) or national classification and IPC		
Applicant AUDI AG		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 10 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising: a. <input checked="" type="checkbox"/> (sent to the applicant and to the International Bureau) a total of 6 sheets, as follows: <input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> (sent to the International Bureau only) a total of _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4. This report contains indications relating to the following items: <input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input checked="" type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input type="checkbox"/> Box No. VIII Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/004095

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:

- ☐ international search (Rule 12.3 and 23.1(b))
☐ publication of the international application (Rule 12.4)
☐ international preliminary examination (Rule 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

☐ the international application as originally filed/furnished

☒ the description:

pages 1-20 as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☒ the claims:

nos. _____ as originally filed/furnished

nos.* _____ as amended (together with any statement) under Article 19

nos.* 1-27 received by this Authority on 03.05.2005 with

nos.* _____ received by this Authority on telefax

☒ the drawings:

sheets 1/9-9/9 as originally filed/furnished

sheets* _____ received by this Authority on _____

sheets* _____ received by this Authority on _____

☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing (*specify*): _____

☐ any table(s) related to sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages _____

☐ the claims, nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing (*specify*): _____

☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/004095

Box No. IV

Lack of unity of invention

1. ☐ In response to the invitation to restrict or pay additional fees the applicant has:
- ☐ restricted the claims.
 - ☐ paid additional fees.
 - ☐ paid additional fees under protest.
 - ☐ neither restricted the claims nor paid additional fees.
2. ☒ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is:
- ☐ complied with.
 - ☒ not complied with for the following reasons:
4. Consequently, this report has been established in respect of the following parts of the international application:
- ☒ all parts.
 - ☐ the parts relating to claims Nos. _____

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/004095

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	<u>1-27</u>	YES
	Claims		NO
Inventive step (IS)	Claims	<u>1-27</u>	YES
	Claims		NO
Industrial applicability (IA)	Claims	<u>1-27</u>	YES
	Claims		NO
2. Citations and explanations (Rule 70.7)			
1. Claim 1:			
1.1 D1 , which is considered to represent the prior art closest to the subject matter of claim 1, discloses:			
<p>process for damping vibration on chassis bearings of motor vehicles, wherein the driving state of the motor vehicle and/or the road conditions are detected by sensors 43 and wherein, in order to modify the stiffness and/or damping of said bearing, the at least a chassis bearing 24 is adjusted to various characteristics according to the detected parameters.</p>			
1.2 The subject matter of claim 1 therefore differs from the known process in that			
<p>a rapid modification of the characteristic of at least a chassis mounting on the rear axle is controlled by road conditions detected on the front axle of the motor vehicle.</p>			

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/004095

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
1.3	Therefore, the subject matter of claim 1 is novel (PCT Article 33(2)).
1.4	The problem addressed by the present invention may therefore be considered that of providing an alternative solution to detecting road conditions with subsequent adjustment of the characteristic of the chassis bearing.
1.5	The solution to this problem proposed in claim 1 of the present application is not known from any of the documents cited in the search report and the description. Therefore, the subject matter of claim 1 involves an inventive step (PCT Article 33(3)).
2.	Claims 2-5: Claims 2-5 are dependent on claim 1 and therefore likewise meet the PCT requirements for novelty and inventive step.
3.	Claim 6:
3.1	D3 , which is considered to represent the prior art closest to the subject matter of claim 6, discloses (see figure 17 and the description associated therewith): a device for vibration damping with sensors for detecting the driving state of a motor vehicle (vehicle speed sensor) and road conditions (path

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/004095

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
	<p>sensor 10), with an electronic control device (comparator and output section) for processing the detected signals and selecting various controllable characteristics (by opening and closing passage 5) and at least a chassis bearing which can be modified with respect to its stiffness and/or damping, wherein the chassis bearing has an outer sleeve 2 and an inner sleeve 1, between which at least an elastic rubber carrying body 3 is provided, and wherein hydraulically acting working chambers 4 which modify the stiffness and the damping action of the chassis bearing via reversing means 6 are formed in the carrying body 3.</p> <p>3.2 The subject matter of claim 6 thus differs from the known device in that</p> <p>some of the working chambers act in an axial direction and other working chambers act in a radial direction and in that both working chambers are reversible between two active damping positions by throttle elements variable by reversing means.</p> <p>3.3 Therefore, the subject matter of claim 6 is novel (PCT Article 33(2)).</p> <p>3.4 The problem addressed by the present invention may therefore be considered that of providing a device with a chassis bearing, wherein the characteristic of the chassis bearing is reversible in an axial</p>

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
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and a radial direction.

- 3.5 The solution to this problem proposed in claim 6 of the present application is not known from any of the documents cited in the search report and the description. Therefore, the subject matter of claim 6 involves an inventive step (PCT Article 33(3)).

4. **Claims 7-11:**

Claims 7-11 are dependent on claim 6 and therefore likewise meet the PCT requirements for novelty and inventive step.

5. **Claim 12:**

- 5.1 **D3**, which is considered to represent the prior art closest to the subject matter of claim 12, discloses all the features mentioned in the preamble of claim 12 (see 3.1 above).

- 5.2 The subject matter of claim 12 thus differs from the known device in that

a membrane actuatable by an actuator for generating counter-vibrations is adjacent to one of the hydraulic working chambers of the chassis bearing.

- 5.3 Therefore, the subject matter of claim 12 is novel (PCT Article 33(2)).

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/004095

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
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5.4	The problem addressed by the present invention may therefore be considered that of enabling disturbing noises transmissible through the chassis bearing into the body shell to be decoupled.
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5.5	The solution to this problem proposed in claim 12 of the present application is not known from any of the documents cited in the search report and the description. Therefore, the subject matter of claim 12 involves an inventive step (PCT Article 33(3)).
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6.	Claims 13-27:
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	Claims 13-27 are dependent on claim 12 (or claim 6) and therefore likewise meet the PCT requirements for novelty and inventive step.
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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of:

Box IV**Lack of unity of invention**

0. This report makes reference to the following documents:

- D1:** PATENT ABSTRACTS OF JAPAN vol. 0170, no. 12
(M-1351), 11 January 1993 (1993-01-11) & JP
04 243613 A (MITSUBISHI MOTORS CORP),
31 August 1992 (1992-08-31)
- D3:** US-A-4 858 899 (NAKAO TSUTOMU ET AL)
22 August 1989 (1989-08-22)

This Authority has determined that the present international application contains multiple (groups) of inventions which are not linked by a single general inventive concept (PCT Rule 13.1), as follows:

- I: Claims 1-5
II: Claims 6-11
III: Claims 12-27

Comparison of the present groups of claims with **D1** and **D3** shows that the following features (cf. Box V) make a contribution over the prior art and can therefore be considered special technical features according to PCT Rule 13.2:

Supplemental Box

Group I: a chassis bearing control system on the rear axle wherein the control system is controlled by road conditions detected on the front axle of a motor vehicle.

Group II: working chambers acting in an axial and a radial direction, which are reversible between two active damping positions by throttle elements variable by reversing means.

Group III: a membrane actuatable by an actuator for generating counter-vibrations, wherein the membrane is adjacent to one of the hydraulic working chambers of the chassis bearing.